

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant: Henrik Przybilla  
Application No.: 10/550,874  
Filed: September 27, 2005  
For: METHOD TO GRANT MODIFICATION RIGHTS FOR A  
SMART CARD

Group Art Unit: 2435  
Examiner: Patel, Nirav B.  
Confirmation No.: 1786

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37(a)

This is an appeal to the Board of Patent Appeals and Interferences from the decision of the Examiner dated November 25, 2009, which finally rejected claims 1-20 (of which claims 1-17 are pending) in the above-identified application. The Office date of receipt of Appellant's Notice of Appeal was February 25, 2010. This Appeal Brief is hereby submitted pursuant to 37 C.F.R. § 41.37(a).

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## **TABLE OF CONTENTS**

I.	REAL PARTY IN INTEREST .....	3
II.	RELATED APPEALS AND INTERFERENCES.....	3
III.	STATUS OF CLAIMS .....	3
IV.	STATUS OF AMENDMENTS .....	4
V.	SUMMARY OF CLAIMED SUBJECT MATTER .....	4
VI.	GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL .....	6
VII.	ARGUMENT.....	6
	A.    Claim 1-9 are patentable over the combination of Everett and Richards because the combination of cited references does not teach all of the limitations of the claims.....	7
	B.    Claims 10, 11, and 16 are patentable over Richards because Richards does not disclose all of the limitations of the claims .....	10
	C.    Claims 12-15 are patentable over the combination of Richards and Everett because the combination of cited references does not teach all of the limitations of the claims .....	11
	D.    Claim 17 is patentable over the combination of Richards and Ishiguro because the combination of cited references does not teach all of the limitations of the claim .....	11
VIII.	CONCLUSION.....	12
IX.	CLAIMS APPENDIX.....	13
X.	EVIDENCE APPENDIX.....	18
XI.	RELATED PROCEEDINGS APPENDIX .....	19

## **I. REAL PARTY IN INTEREST**

The real party in interest is the assignee of the full interest in the invention, NXP B.V., of Eindhoven, Netherlands.

## **II. RELATED APPEALS AND INTERFERENCES**

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal that will directly affect, be directly affected by, or have a bearing on the Board's decision in the instant appeal.

## **III. STATUS OF CLAIMS**

Claims 1-17 are pending.

Claims 18-20 are canceled by way of the after-final amendment entered by the Examiner.

No claims are withdrawn.

Claims 7 and 8 were objected to because of informalities.

Claims 1-17 stand rejected as follows:

Claims 10, 11, and 16 stand rejected under 35 U.S.C. 102(b) as being anticipated by Richards et al. (U.S. Pat. No. 6,230,267, hereinafter Richards).

Claims 1-9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Everett et al. (U.S. Pat. Pub. No. 2002/0050528, hereinafter Everett) and in view of Richards. For reference, claim 18 (now canceled) was rejected under the same ground of rejection.

Claims 12-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Richards and in view of Everett. For reference, claims 19 and 20 (now canceled) were rejected under the same ground of rejection.

Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Richards and in view of Ishiguro et al. (U.S. Pat. No. 5,502,765, hereinafter Ishiguro).

Claims 1-17 are the subject of this appeal. A copy of claims 1-17 is set forth in the Claims Appendix.

#### **IV. STATUS OF AMENDMENTS**

Proposed amendments were submitted subsequent to the Final Office Action mailed November 25, 2009. The proposed amendments incorporate language from dependent claims 18-20 into independent claims 1, 10, and 16, respectively. Consequently, claims 18 -20 are canceled. The proposed amendments also revise language in claims 7 and 8 for proper antecedent basis. The Advisory Action mailed on February 18, 2010, indicates that these proposed amendments will be entered.

#### **V. SUMMARY OF CLAIMED SUBJECT MATTER**

This section of this Appeal Brief is set forth to comply with the requirements of 37 C.F.R. § 41.37(e)(1)(v) and is not intended to limit the scope of the claims in any way. Examples of implementations of the limitations of independent claims 1, 10, and 16 are described below.

The language of claim 1 relates to a granting method to grant a modification device a modification right to modify an application in a data carrier. Page 6, lines 18-19; Fig. 2. The method includes generation of a first key information item and of an associated second key information item for a data carrier identified by a data carrier identification information item. Page 6, lines 32-34. The method also includes generation of a first master key information item and an associated second master key information item in addition to the first key information item and the associated second key information item. Page 7, lines 1-3. The method also includes checking of the association of the first key information item stored in the data carrier with the second key information item from the modification device, and allowing of the modification of the application in the data carrier by the modification device in response to a determination that the first key information item is associated with the second key information item. Page 9, lines 29-33. The method also includes checking of the association between the first master key information item stored in the data carrier with the second master key information item from the modification device, and allowing a modification by the

modification device of access rights to at least one interface of the data carrier in response to a determination that the first master key information item is associated with the second master key information item. Page 10, line 30, through page 11, line 15.

The language of claim 10 relates to a data carrier for running at least one application. Page 6, lines 11-17; Fig. 1. The data carrier includes at least one interface for the contactless and/or contact communication of information items. Page 6, lines 11-17; Fig. 1, antenna 3, contact bank 4, interface means 11. The data carrier also includes computer means for running the at least one application and for processing the information items communicated via the interfaces or information items stored in the data carrier. Page 7, lines 22-24; Fig. 1, computer means 6. The data carrier also includes storage means for storing a first key information item, a first master key information item separate from the first key information item, and an associated data carrier identification information item that identifies the data carrier. Page 7, lines 9-13; Fig. 1, security storage means 8. The data carrier also includes checking means for checking a modification right of a modification device to modify an application in the data carrier via the interface, and for checking the association of the first key information item stored in the storage means with a second key information item output to the data carrier by the modification device. Page 9, lines 29-33; Fig. 1, security application AS. The data carrier also includes modification means which, following confirmation of the modification right of the modification device by the checking means, enable modification of the application in the data carrier by the modification device. Page 10, lines 1-29. The checking means also check an association of the first master key information item stored in the storage means with a second master key information item from the modification device. Page 10, line 30, through page 11, line 15. The modification means also, upon confirmation of the association of the first master key information item with the second master key information item, enable modification of access rights to the at least one interface for the contactless and/or contact communication. Page 10, line 30, through page 11, line 15.

The language of claim 16 relates to a modification device for modifying an application in a data carrier. Page 6, lines 18-19; Fig. 1, modification device 5. The modification device includes at least one interface for the contactless and/or contact

communication of information items to a data carrier identified by a data carrier identification information item. Page 9, lines 15-17; Fig. 1, contact bank 12. The modification device also includes storage means for storing at least one data carrier identification information item that identifies a data carrier, an associated second key information item, and a second master key information item. One example of the storage means is identified above. Page 3, lines 11-12. The modification device also includes computer means for modifying applications in data carriers via the interface where, in the course of communication with a data carrier identified by a stored data carrier identification information item. Page 3, lines 13-19. The modification right of the modification device is output to the data carrier by communication of the second key information item associated with this data carrier identification information item. Following confirmation of the modification right by the data carrier, the modification device is authorized and designed to modify the application in the data carrier. The computer means also modifies access rights to at least one interface of the data carrier in response to a determination that the second master key information item is associated with a first master key information item stored on the data carrier. Page 10, line 30, through page 11, line 15.

#### **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- A. Whether claims 1-9 are patentable over the combination of Everett and Richards under 35 U.S.C. 103(a).
- B. Whether claims 10, 11, and 16 are patentable over Richards under 35 U.S.C. 102(b).
- C. Whether claims 12-15 are patentable over the combination of Richards and Everett under 35 U.S.C. 103(a).
- D. Whether claim 17 is patentable over the combination of Richards and Ishiguro under 35 U.S.C. 103(a).

#### **VII. ARGUMENT**

For the purposes of this appeal, claims 1-9 are argued together as a separate group for purposes of the question of patentability over the combination of Everett and Richards

under 35 U.S.C. 103(a). Claims 10, 11, and 16 are argued together as a group for purposes of the question of patentability over Richards under 35 U.S.C. 102(b). Claims 12-15 are argued together as a separate group for purposes of the question of patentability over the combination of Richards and Everett under 35 U.S.C. 103(a). Claim 17 is argued separately for purposes of the question of patentability over the combination of Richards and Ishiguro under 35 U.S.C. 103(a).

A. Claims 1-9 are patentable over the combination of Everett and Richards because the combination of cited references does not teach all of the limitations of the claims.

Appellant respectfully submits that claim 1 is patentable over the combination of Richards and Everett because the combination of cited references does not disclose all of the limitations of the claim. Claim 1 recites:

A granting method to grant a modification device a modification right to modify an application in a data carrier, the method comprising:

generation of a first key information item and of an associated second key information item for a data carrier identified by a data carrier identification information item;

generation of a first master key information item and an associated second master key information item in addition to the first key information item and the associated second key information item;

checking of the association of the first key information item stored in the data carrier with the second key information item from the modification device;

allowing of the modification of the application in the data carrier by the modification device in response to a determination that the first key information item is associated with the second key information item;

checking of the association between the first master key information item stored in the data carrier with the second master key information item from the modification device; and

allowing a modification by the modification device of access rights to at least one interface of the data carrier in response to a determination that the first master key information item is associated with the second master key information item.

(Emphasis added.)

In contrast, the combination of Richards and Everett does not teach all of the limitations of the claim because the combination of cited references does not teach

modifying access rights of an interface of the data carrier. For reference, the Examiner's reasoning relies on Richards as purportedly teaching the indicated limitation.

Specifically, with reference to the verification and authentication processes described in Richards, the Examiner states:

In this case, Richards teaches modifying the access rights to the IC card (whether it can load the [application unit (AU)] or not), which includes the interface, based on the above verification/checking process. Therefore, it meets the claim limitation.

Advisory Action, 2/18/10, page 2 (emphasis added).

Thus, the Examiner's reasoning relies on a correlation between 1) the access rights to the IC card and 2) the access rights to the interface. In fact, the Examiner's reasoning appears to assert that the access rights to the IC card, generally, are the same as the access rights to the interface. However, this correlation is not supported by the actual teachings of Richards.

In general, Richards is directed to securely transporting data onto an integrated circuit (IC) card. Richards, abstract. In order to facilitate the transfer, an individualized key set is generated for each IC card and stored on the IC card. Richards, col. 7, lines 62-65. These keys are used for verification and secure data transportation. Richards, col. 7, lines 65-67. Richards also provides some details of how these keys are generated by a certification authority (CA) that manages the overall security of the IC card system. Richards, col. 7, line 67, through col. 8, line 43; Fig. 4. Once the keys are generated, a terminal can read the public key certificate from the IC cards to verify that the CA has signed and therefore approved the individual IC card. Richards, col. 8, lines 44-48.

In addition to describing the key generation process, Richards also describes several functions related to loading an application or other data on the IC card. Richards, col. 10, line 18, through col. 11, line 13. In general, the IC card uses the keys of the IC card and the signatures of the CA to verify the identity of the IC card, as well as the authorization to load the application unit (AU) on the card. Richards also describes that the application load unit (ALU), which includes the AU and other authentication information, can be transmitted to the IC card via a terminal connection, contactless

connection, telephone, computer, intranet, Internet, or any other communication means. Richards, col. 10, lines 30-33.

Despite all of this description of how the keys are generated and used to load application data onto the IC cards, Richards does not describe any method of modifying access rights to an actual interface of the data carrier. For example, Richards does not describe any way to modify the type of interface (e.g., contact terminals, contactless connections, etc.) that might be accessed by a particular user or for a particular application. Moreover, the description in Richards of granting access to the IC card in order to load an AU or other authentication information is insufficient to teach modifying the access rights of a particular interface through which the AU or other authentication information might be transmitted to the IC card. Furthermore, even if Richards were to describe some type of correlation between different applications and interfaces, the teachings of Richards nevertheless are insufficient to teach allowing a modification of such correlated access rights. Therefore, Richards does not teach allowing a modification of the access rights of an interface of the data carrier because Richards merely describes using the IC key set to load data on the IC card, generally. Moreover, Richards does not teach allowing a modification of the access rights of an interface of the data carrier in response to a determination that first and second master keys are associated. While these specific examples are not and should not be read into the limitations of the claims of the present application, these examples are provided herein to help illustrate the deficiencies of the teachings of Richards, because Richards doesn't provide any explanation of how the access rights of a particular interface itself (as opposed to the IC card, generally, or the other sub-components of the IC card) might be modified.

Moreover, the correlation proposed by the Examiner between the access rights of the IC card, generally, and the access rights of the interface, specifically, is not a required conclusion based on the actual teachings of Richards. Rather, Richards simply does not address how access rights for an interface may or may not be related to access rights for the IC card, generally. In the absence of specific teachings related to access rights of a particular interface, it should be noted that there are many other possible ways in which the access rights of the IC card may be controlled, without modifying access rights of a particular interface. For example, it's possible that the access rights of the IC card might

be controlled by modifying read/write privileges of a memory device within the IC card. Modifying the read/write privileges of a memory device could potentially satisfy the more general teachings of Richards, without necessitating any involvement from or modification of access rights for a particular interface of the IC card. Thus, the proposed correlation between the IC card, generally, and a particular interface of the IC card simply is not supported or required by the actual teachings of Richards.

For the reasons presented above, the combination of Richards and Everett does not teach all of the limitations of the claim because the combination of cited references does not teach allowing a modification of access rights of an interface of a data carrier, as recited in the claim. Accordingly, Appellant respectfully asserts claim 1 is patentable over the combination of Richards and Everett because the combination of cited references does not teach all of the limitations of the claim.

Given that claims 2-9 depend from and incorporate all of the limitations of independent claim 1, which is patentable over the cited reference, Appellant respectfully submits that dependent claims 2-9 are also patentable over the cited reference based on an allowable base claim. Additionally, each of claims 2-9 may be allowable for further reasons. Accordingly, Appellant requests that the rejections of claims 1-9 under 35 U.S.C. § 103(a) be withdrawn.

B. Claims 10, 11, and 16 are patentable over Richards because Richards does not disclose all of the limitations of the claims.

Appellant respectfully asserts independent claims 10 and 16 are also patentable over Richard at least for similar reasons to those stated above in regard to the rejection of independent claim 1. In particular, the rejections of these claims merely rely on the same reasoning that the Office Action provided for the rejection of claim 1. Here, although the language of these claims differs from the language of claim 1, and scope of each claim should be interpreted independently of claim 1, Appellant respectfully asserts that the remarks provided above in regard to the rejection of claim 1 also apply to the rejections of these claims. Accordingly, Appellant respectfully asserts independent claims 10 and 16 are patentable over Richards because Richards does not disclose the enabling modification of access rights to an interface, as explained above.

Given that claims 11-15 and 17 depend from and incorporate all of the limitations of the corresponding independent claims 10 and 16, which are patentable over the cited reference, Appellant respectfully submits that dependent claims 11-15 and 17 are also patentable over the cited reference based on allowable base claims. Additionally, each of claims 11-15 and 17 may be allowable for further reasons. Accordingly, Appellant requests that the rejections of claims 10-17 under 35 U.S.C. § 102(b) be withdrawn.

C. Claims 12-15 are patentable over the combination of Richards and Everett because the combination of cited references does not teach all of the limitations of the claims.

Claims 12-15 depend from and incorporate all of the limitations of independent claim 10, which is patentable over the cited references, Appellant respectfully submits that dependent claims 12-15 are also patentable over the cited references based on an allowable base claim. Additionally, each of claims 12-15 may be allowable for further reasons. Accordingly, Appellant requests that the rejections of claims 12-15 under 35 U.S.C. § 103(a) be withdrawn.

D. Claim 17 is patentable over the combination of Richards and Ishiguro because the combination of cited references does not teach all of the limitations of the claim.

Claim 17 depends from and incorporates all of the limitations of independent claim 16, which is patentable over the cited references, Appellant respectfully submits that dependent claim 17 is also patentable over the cited references based on an allowable base claim. Additionally, claim 17 may be allowable for further reasons. Accordingly, Appellant requests that the rejection of claim 17 under 35 U.S.C. § 103(a) be withdrawn.

### VIII. CONCLUSION

For the reasons stated above, claims 1-17 are patentable over the cited references. Thus, the rejections of claims 1-17 should be withdrawn. Appellant respectfully requests that the Board reverse the rejections of claims 1-17 under 35 U.S.C. 102(b) and 103(a).

At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account **50-4019** pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account **50-4019** under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21.

Respectfully submitted,

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Date: April 26, 2010

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## IX. CLAIMS APPENDIX

1. A granting method to grant a modification device a modification right to modify an application in a data carrier, the method comprising:

generation of a first key information item and of an associated second key information item for a data carrier identified by a data carrier identification information item;

generation of a first master key information item and an associated second master key information item in addition to the first key information item and the associated second key information item;

checking of the association of the first key information item stored in the data carrier with the second key information item from the modification device;

allowing of the modification of the application in the data carrier by the modification device in response to a determination that the first key information item is associated with the second key information item;

checking of the association between the first master key information item stored in the data carrier with the second master key information item from the modification device; and

allowing a modification by the modification device of access rights to at least one interface of the data carrier in response to a determination that the first master key information item is associated with the second master key information item.

2. A granting method as claimed in claim 1, wherein the modification right gives the right to install and/or update and/or delete the application in the data carrier.

3. A granting method as claimed in claim 1, wherein the modification right only gives the right to modify a specific application in the data carriers.

4. A granting method as claimed in claim 1, wherein the modification right only gives the right to install an application requiring a predefined maximum amount of storage space in the data carrier.

5. A granting method as claimed in claim 1, wherein the data carrier identification information item identifies a group of data carriers.
6. A granting method as claimed in claim 1, wherein the modification right also determines the access rights of the application that is to be modified in the data carrier to storage areas and interfaces of the data carriers.
7. A granting method as claimed in claim 1, wherein the modification of access rights in the data carrier and/or the generation of further key information items in the data carrier and the modification device is possible only with the first master key information item stored in the data carrier and only with the second master key information item stored in the modification device.
8. A granting method as claimed in claim 7, wherein the first master key information item and the associated second master key information item only make it possible to modify access rights of a specific application in the data carrier and/or to generate further key information items in the data carrier and the modification device in order to modify a specific application.
9. A granting method as claimed in claim 1, wherein modification of the application in the data carrier by the modification device of the data carrier is only permitted when specific properties of the application that is to be modified are determined.

10. A data carrier for running at least one application, the data carrier comprising:
  - at least one interface for the contactless and/or contact communication of information items,
    - computer means for running the at least one application, where information items communicated via the interfaces or information items stored in the data carrier are processed,
    - storage means for storing a first key information item, a first master key information item separate from the first key information item, and an associated data carrier identification information item that identifies the data carrier,
    - checking means for checking a modification right of a modification device to modify an application in the data carrier via the interface, where the checking means are designed to check the association of the first key information item stored in the storage means with a second key information item output to the data carrier by the modification device, and
    - modification means which, following confirmation of the modification right of the modification device by the checking means, are designed to enable modification of the application in the data carrier by the modification device;
    - wherein the checking means are further configured to check an association of the first master key information item stored in the storage means with a second master key information item from the modification device;
    - wherein the modification means are further configured, upon confirmation of the association of the first master key information item with the second master key information item, to enable modification of access rights to the at least one interface for the contactless and/or contact communication.

11. A data carrier as claimed in claim 10, wherein the checking means are designed to confirm a restricted modification right which only gives the right to install and/or update and/or delete the application, in the data carriers.

12. A data carrier as claimed in claim 10, wherein the checking means are designed to confirm a restricted modification right which only gives the right to modify a specific application in the data carrier.

13. A data carrier as claimed in claim 10, wherein the checking means are designed to confirm a restricted modification right which only gives the right to install an application requiring a predefined maximum amount of storage space in the data carrier.

14. A data carrier as claimed in claim 10, wherein the checking means are designed to confirm a modification right which determines the access rights of the application that is to be modified in the data carrier to storage areas of the storage means and interfaces of the data carrier.

15. A data carrier as claimed in claim 10, wherein the computer means are designed to run an application formed by a Java applet.

16. A modification device for modifying an application in a data carrier, the modification device comprising:

at least one interface for the contactless and/or contact communication of information items to a data carrier identified by a data carrier identification information item,

storage means for storing at least one data carrier identification information item that identifies a data carrier, an associated second key information item, and a second master key information item, and

computer means for modifying applications in data carriers via the interface where, in the course of communication with a data carrier identified by a stored data carrier identification information item, the modification right of the modification device is output to the data carrier by communication of the second key information item associated with this data carrier identification information item, whereupon, following confirmation of the modification right by the data carrier, the modification device is authorized and designed to modify the application in the data carrier, wherein the

computer means is further configured to modify access rights to at least one interface of the data carrier in response to a determination that the second master key information item is associated with a first master key information item stored on the data carrier.

17. A modification device as claimed in claim 16, wherein the modification device is formed by an operator computer containing the storage means and by a reading device that is connected to the operator computer over a data network, the reading device comprising the at least one interface and at least part of the computer means of the modification devices.

18-20. (canceled)

## **X. EVIDENCE APPENDIX**

There is no evidence submitted with this Appeal Brief.

## **XI. RELATED PROCEEDINGS APPENDIX**

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal that will directly affect, be directly affected by, or have a bearing on the Board's decision in the instant appeal.